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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,811

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Kil-Wan Jan

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THE FARRELL LAW FIRM, P.C.
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EXAMINER

GILBERT, ANDREW M

ART UNIT

PAPER NUMBER

3767

MAIL DATE

DELIVERY MODE

06/02/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,811	Applicant(s) JAN ET AL.	
	Examiner ANDREW GILBERT	Art Unit 3767	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/16/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/18/2011 has been entered.

Acknowledgments

1. This office action is in response to the reply filed on 5/18/2010.
2. In the reply, the applicant amended claim 1. The 35 USC § 112 rejection of claim 1 has been obviated in view of the applicant's amendment.
3. Thus, claims 1-6 are pending for examination.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 1 recites the limitation "the rear end" in ln 2-3. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 2 recites the limitation "the front end of the injector receiving space" in ln 1-2. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 2 recites the limitation "the front end of the syringe" in ln 2. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 2 recites the limitation "the rear end of the push plate case" in ln 3-4.

There is insufficient antecedent basis for this limitation in the claim.

9. Claim 3 recites the limitation "the closed front end" and "the opened rear end " in ln 2. There is insufficient antecedent basis for this limitation in the claim.

10. The term "appropriate position" in claim 1, ln 3 is a relative term which renders the claim indefinite. The term "appropriate position" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. What is an appropriate vs. inappropriate position for forming the injector receiving space in a housing? What factor(s) decides whether the position is appropriate or inappropriate? There is no standard for ascertaining the requisite degree.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et al (6800071).

13. McConnell et al discloses an automatic insulin pump (Fig 4) comprising: an injector having a syringe (406) for containing insulin therein, and a piston (407) inserted into the rear end of the syringe for providing the syringe with insulin discharge pressure; a housing (402) having an injector receiving space (Fig 4) formed in an appropriate

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position thereof, the injector receiving space having a partition wall (428) formed at the rear end thereof; a rotary shaft (501) having a non-circular section and a predetermined length; a power supply means for rotating the rotary shaft at a predetermined speed (403); a push plate assembly (405) for providing the piston with ahead power by pushing the piston, the push plate assembly having a disk part (405 that intersects with 410) having a male screw formed on the outer circumferential surface thereof and a coupling hole (404 – see annotated drawing in response to arguments) axially coupled with the rotary shaft at the central portion thereof to allow for forward and backward movement of the rotary shaft and to transfer rotation of the rotary shaft (Fig 4-7a), which passes through the coupling hole; and a hollow cylindrical type push plate case inserted into the injector receiving space of the rear end of the syringe (Figs 4-7a), for the piston to pass through the rear end of the syringe (Fig 4, 7), the push plate case having a female screw (404 – see annotated drawing in response to arguments) formed on the inner circumferential surface thereof to be coupled with the male screw of the disk part for allowing the disk part to carry out a spirally forward and backward movement (Figs 4-7a); wherein the piston (407) has a hollow cylindrical body having the closed front end and the opened rear end, and wherein the push plate assembly includes: the disk part (405 that intersects with 410), a hollow cylindrical type idle rotation sleeve (Figs 4-7a) protruding from the surface of a side of the disk part; and, a hollow cylindrical type fixed sleeve inserted into the outer circumferential surface of the idle rotation sleeve (432) carry out the idle rotation, the outer circumferential surface of the fixed sleeve being

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fixed to the inner circumferential surface of the rear end portion of the piston (Figs 4-7a).

Additionally, see response to arguments below.

14. McConnell et al discloses the invention substantially as claimed except for expressly disclose the coupling hole being non-circular and the rotary shaft having a non-circular section. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the coupling hole be non-circular and the rotary shaft having a non-circular section because the Applicant has not disclosed that having the coupling hole be non-circular and the rotary shaft having a non-circular section provides an advantage, is used for a particular purpose, or solves a stated problem (e.g. see paragraph 33, where the Applicant states that various coupling hole shapes may be used). Furthermore, one of ordinary skill in the art would have expected the Applicants invention to perform equally well with the apparent circular hole and shaft shape of McConnell et al because it performs substantially the same function in substantially the same manner. Therefore, it would have been an obvious matter of design choice to modify the coupling hole to obtain the invention as specified in claims 1, 3.

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et al. McConnell et al discloses the invention substantially as claimed except for expressly disclosing idle-rotation prevention saws on the partition wall and the rear end of the push plate case. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have idle-rotation prevention saws on the partition wall and the rear end of the push plate

case because the Applicant has not disclosed that having idle-rotation prevention saws on the partition wall and the rear end of the push plate case provides an advantage, is used for a particular purpose, or solves a stated problem. Furthermore, one of ordinary skill in the art would have expected the Applicants invention to perform equally well with the thread limiters (see Fig 6, near 431 and 601) of McConnell et al because the thread limiters prevent rotation relative to another in a substantially similar manner. Therefore, it would have been an obvious matter of design choice to modify the thread limiters to obtain the invention as specified in claim 2.

16. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et al in view of Choi (6572585). McConnell et al discloses the invention substantially as claimed except for expressly disclosing a string holding means on the housing. Choi teaches that it is known to have a string holding means on the housing (col 12, lns 60-65) for the purpose of allow the user to wear and carry the device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device as taught by McConnell et al with the string holding means as taught by Choi for the purpose of allowing the user to wear and carry the device.

17. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et al in view of Cochran (4773900). McConnell et al discloses the invention substantially as claimed except for expressly disclosing a wrench for manual operation. Cochran teaches that it is known to have wrench (col 4, lns 16-20) for the purpose of manual plunger driving. It would have been obvious to one having ordinary skill in the

art at the time the invention was made to modify the device as taught by McConnell et al with the wrench as taught by Cochran for the purpose of allowing for manual plunger driving.

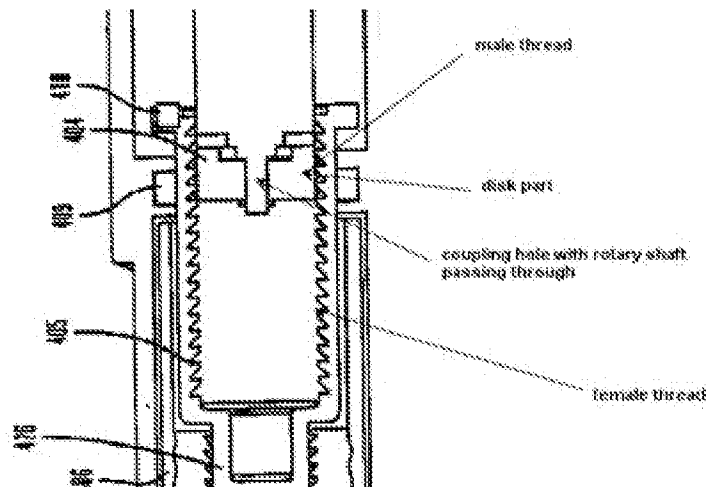
Allowable Subject Matter

18. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

19. Applicant's arguments filed 5/18/2010 have been fully considered but they are not persuasive.

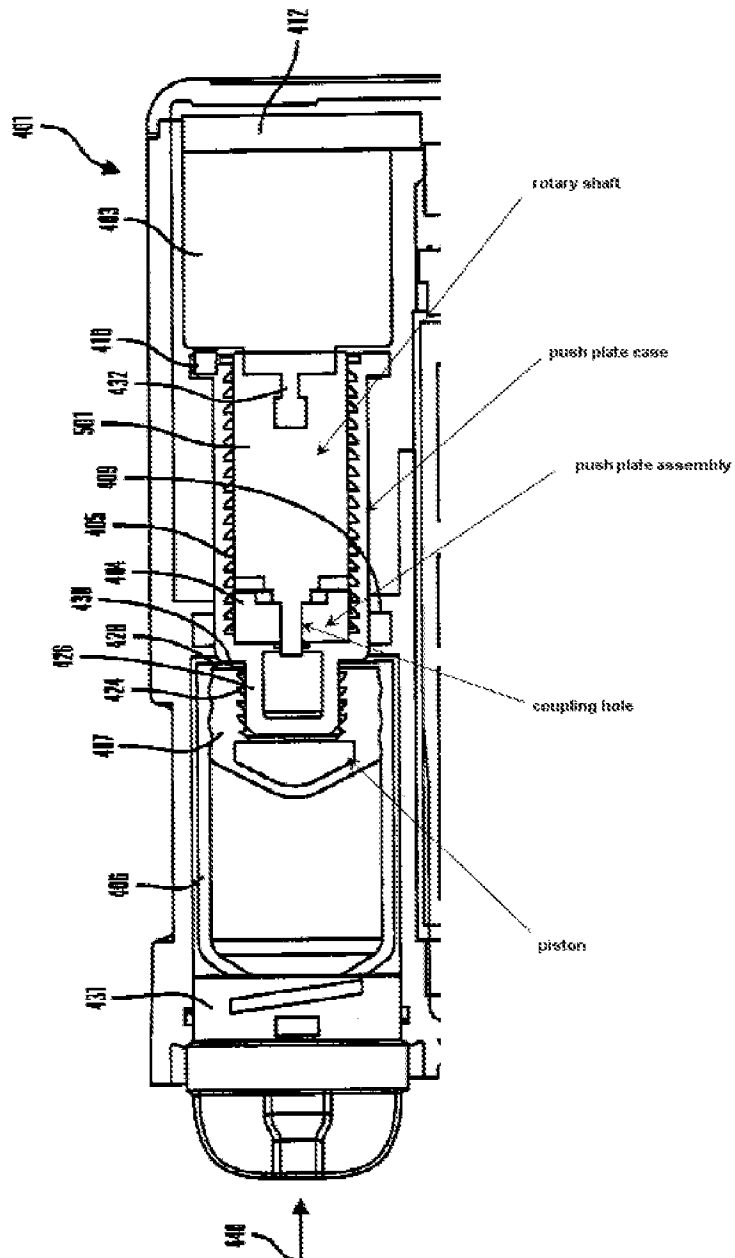
20. The applicant argues that McConnell does not teach a rotary shaft having a non-circular section and a pre-determined length and it would not be an obvious design choice to modify to be a non-circular section because the applicant has taught a criticality for the non-circular section, namely that the rotary shaft must be non-circular in order for the turning operation to be realized. This is not persuasive. First, as shown in annotate Fig 7 excerpted below (reproduced in full below as well), the disk part and the rotary shaft passing through the coupling hole are engaged and appear to be circular (McConnell is not explicit regarding this), yet the elements are engaged so as to fit and rotate together to fulfill the operation of McConnell. Thus, the rejection is maintained. It would have been obvious to one of ordinary skill in the art to modify the seemingly circular rotary shaft and coupling hole to be non-circular, because doing so would perform substantially the same function in substantially the same manner.



21.

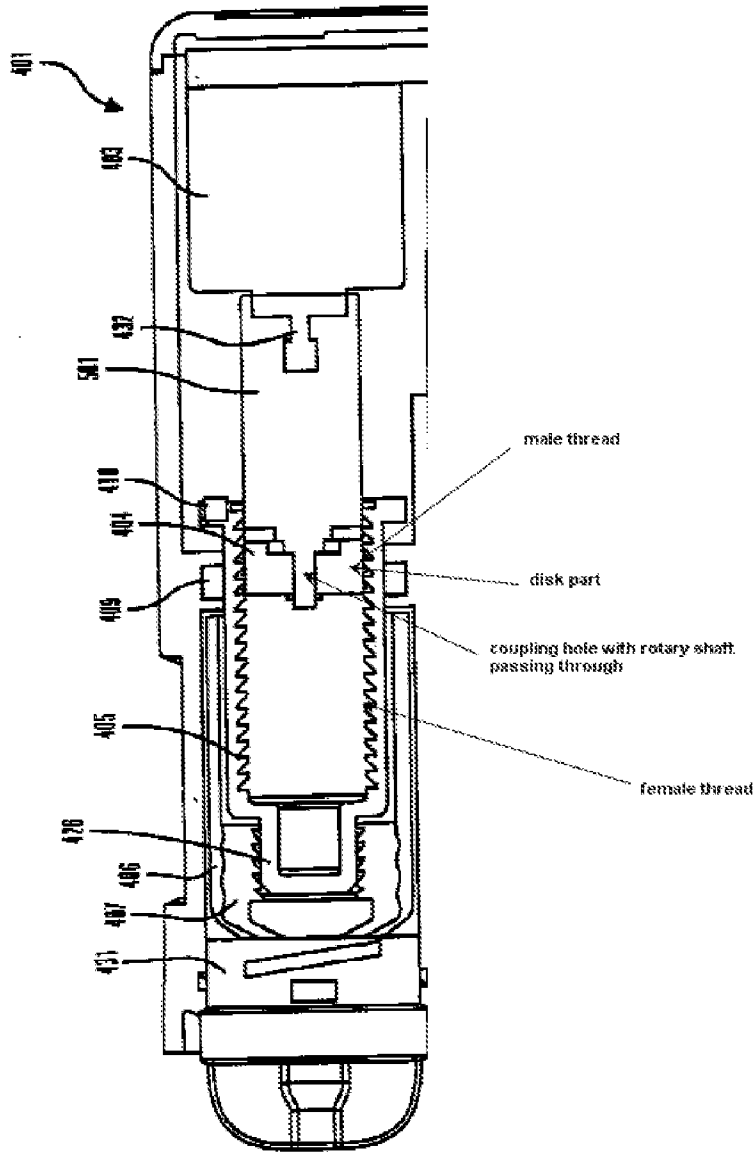
22. Further, the applicant argues that making the rotary shaft of McConnell non-circular would destroy McConnell's functionality because the drive mechanism is cylindrically shaped. The Examiner agrees, but notes that the applicant has claimed "a rotary shaft having a non-circular section" not a non-circular rotary shaft. Only the section of the rotary shaft passing through the coupling hole is needed to be non-circular to be a non-circular section that is coupled to the non-circular coupling hole.

23. Finally, the applicant argues that the Examiner has not addressed the issue that the rear end of the syringe 406 in McConnell does not have inserted therein a hollow cylindrical type push plate case as required by claim 1. The Examiner respectfully disagrees and directs the applicant to the following annotated Figure 4 and 7 of McConnell that were included in the Final Rejection mailed on 3/23/2010. As shown, the syringe 406 has a hollow cylindrical type push plate case (see annotation) inserted therein. The rejection is maintained.



24.

25. And Figure 7:



26.

27. Thus, the Examiner notes that McConnell clearly discloses a female screw formed on the inner circumferential surface.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW GILBERT whose telephone number is (571)272-7216. The examiner can normally be reached on 8:30 am to 5:00 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Sirmons can be reached on (571)272-4965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Theodore J Stigell/
Primary Examiner, Art Unit 3763

/Andrew M Gilbert/
Examiner, Art Unit 3767